Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Updating the Commission's Rule for Over-the-Air Reception Devices	)	WT Docket No. 19-71
	)	

REPLY COMMENTS OF
CONSUMER TECHNOLOGY ASSOCIATION

Consumer Technology Association ("CTA") respectfully submits these reply comments in support of the above-captioned Notice of Proposed Rulemaking ("*Notice*"), which proposes to expand the scope of the OTARD rule so that it protects hub and relay antennas, i.e., those that transmit fixed wireless signals to or receive fixed wireless signals from multiple customer locations.[1] CTA represents more than 2,200 member companies – 80% are small businesses and startups; others are among the world's best-known brands – who comprise the $398 billion U.S. consumer technology industry. CTA also owns and produces CES®, the world's gathering place for all who thrive on the business of consumer technologies.

I. INTRODUCTION

The extension of the OTARD rule to hub and relay antennas has the potential to be another tool in the FCC's toolbox to facilitate broadband and 5G services. The consumer technology industry is rapidly introducing and deploying technologies to better individuals' lives. 5G and the Internet of Things ("IoT") are already transforming lives and industries.

[1] *Updating the Commission's Rule for Over-the-Air Reception Devices*, Notice of Proposed Rulemaking, WT Docket No. 19-71, FCC 19-36 (released Apr. 12, 2019) ("*Notice*").

All comments cited herein, unless otherwise noted, refer to comments submitted to WT Docket No. 19-71 and dated June 3, 2019.

Researchers are experimenting with new types of antennas, spectrum sharing techniques, and ways of harmonizing existing and on-the-horizon technologies. The incredible growth of IoT connected devices as well as the backhaul and data-processing needed to support ubiquitous connectivity are driving innovators to make existing technologies more efficient and useful as well as push to deploy new technologies and services. CTA members are also developing new fixed and mobile broadband technologies that, along with existing technologies, have the potential to bring more reliable and faster broadband to rural America.

As developers and strong supporters of innovative and disruptive technologies, CTA's members deeply appreciate the Commission's many ongoing efforts to promote and facilitate deployment of broadband generally, and 5G wireless services in particular. The OTARD rule has been incredibly successful for over twenty years, enabling competition and connectivity around the country through small and unobtrusive antennas. The record supports Commission action to extend the OTARD rule to hub and relay antennas as a next step to enable and spur infrastructure deployment, especially in rural America.

II. THE FUTURE INTERNET REQUIRES VASTLY EXPANDED AND DENSIFIED WIRELESS INFRASTRUCTURE

Consumer demand for higher speeds and for more data-intensive applications that require reliable connectivity will continue unabated for the foreseeable future.[2] And, just as the future internet will depend on a mixture of unlicensed and licensed spectrum across multiple bands, so too will it depend on the availability of rich and diverse infrastructure.

[2] *See, e.g.*, Comments of Consumer Technology Association, ET Docket No. 18-21 (May 2, 2018); Cisco, Visual Networking Index: Forecast and Trends, 2017-2022. At 2 (February 2019), https://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white-paper-c11-741490.pdf (predicting that fixed IP traffic will grow at a Compound Annual Growth Rate ("CAGR") of 24 percent between 2017 and 2022, while mobile traffic grows at a CAGR of 46 percent) ("Cisco VNI").

5G will truly be "the platform for tomorrow's innovation, offering speeds 100 times faster and five times more responsive than today's networks."[3] Those 5G services will use high frequency bands (particularly in those places where traffic demands will be highest), in addition to the new, lower band mobile spectrum in the 600 MHz band that is now being deployed. The shorter-range propagation characteristics of higher or millimeter wave bands, combined with the increasing demand for data-intensive wireless services, dictate densified infrastructure deployment.[4]

The availability of broadband is an important factor in the growth of emerging technologies. Indeed, one study found that the availability of broadband "has a positive and significant effect on location decisions of new firms in rural areas."[5] The deployment of 5G technologies likely will occur in concert with other significant technological breakthroughs in artificial intelligence, IoT, robotics, blockchain, user interfaces, and edge computing – all technologies that either rely on, or can be enhanced by, wireless connectivity. For example, in urban and indoor environments, the millions of low-power monitors, sensors, and other devices that will comprise the IoT will depend on close-by wireless facilities to connect them to core networks and to the internet. With these innovations occurring in conjunction with 5G

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[3] Gary Shapiro, *What 5G can do for DC*, Washington Examiner (Mar. 4, 2019), https://www.washingtonexaminer.com/opinion/op-eds/what-5g-can-do-for-dc; *see also Presidential Memorandum on Developing a Sustainable Spectrum Strategy for America's Future*, Sec. 1 (issued Oct. 25, 2018), https://www.whitehouse.gov/presidential-actions/presidential-memorandum-developing-sustainable-spectrum-strategy-americas-future (declaring that "it is imperative that America be first in fifth-generation (5G) wireless technologies").

[4] Comments of Consumer Technology Association, WT Docket No. 17-79, at 4 (June 15, 2017); CTIA Comments at 2-3.

[5] Younjun Kim & Peter F. Orazem, *Broadband Internet and New Firm Location Decisions in Rural Areas* (Jan. 2016), https://business.unl.edu/outreach/bureau-of-business-research/academic-research/documents/kim/broadband.pdf.

deployment, there could be three to five times more disruption in the 5G cycle as compared to the 4G cycle.[6] Likewise consumer preferences demonstrate an increasing use of video streaming over wireless facilities.[7]

Meeting the demands of emerging technologies and connecting those on the other side of the digital divide will require more cost-efficient, appropriately-sized, densified, and rapidly deployed infrastructure. A recent analysis of census data found that 18 percent of students do not have home access to broadband internet, and that in some areas, such "rural northern Mississippi, reliable home internet is not available for some at *any* price."[8] Accordingly, government action to update regulations so that they are accurately scaled to the risks and environmental impacts of 5G wireless technologies is critical to encourage next generation networks. Indeed, the Commission is correctly examining the different regulatory tools at the agency's disposal to support broadband deployment.

III. EXPANDING THE OTARD RULE IS AN IMPORTANT NEXT STEP TO ENCOURAGE INFRASTRUCTURE DEPLOYMENT

CTA commends the Commission for proposing to preserve and expand the current OTARD rule. For nearly three decades, the OTARD rule has successfully encouraged

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[6] CTA, 5G U.S. Market Impact, at 14 (2018), https://www.cta.tech/Research-Standards/Reports-Studies/Studies/2018/5G-U-S-Market-Impact.aspx.

[7] Cisco VNI at 14-15 (predicting a 10% CAGR in digital media adapters such as Roku, Apple TV, and Chromecast and a 22% CAGR in digital media adapter IP traffic from 2017-2022, and noting that "cord-cutting households" generates 72 percent higher traffic than an average household); *id.* at 28 (noting that smartphones have become "the 'communications hub' for social media, video consumption, tracking IoT/digitization applications (et al.)" and therefore "will represent 44 percent of global IP traffic by 2022 (up from 18 percent in 2017)"); Wireless Internet Service Providers Association ("WISPA") Comments at 2-3.

[8] Michael Melia, Jeff Amy, and Larry Fenn, *AP: 3 million US students don't have home internet*, Associated Press (June 10, 2019), https://apnews.com/7f263b8f7d3a43d6be014f860d5e4132 (emphasis added).

competition in video and certain wireless services. But, the *Notice* correctly observes that the existing rule "reflect[s] the infrastructure needs of a previous generation of wireless technologies that relied on larger antennas spread over greater distances to provide service to consumers."[9]

Emerging technologies use smaller form factors than previous generation's macro towers, and these smaller form factors must be closer to end-users.[10] Over the past two years, the Commission took important steps to streamline state and local review of infrastructure siting as well as federal review pursuant to the National Environmental Policy Act ("NEPA") and the National Historic Preservation Act ("NHPA").[11] These steps lowered barriers to infrastructure deployment. As explained by the record, expanding the OTARD rule to include all fixed wireless equipment is a reasonable next step for the Commission to consider.[12]

[9] *Notice* ¶ 7.

[10] *See, e.g.*, Starry Inc. Comments at 4 ("In most cases, fixed wireless networks are optimized for near-line-of-sight connectivity between transmitters and receivers, and rely extensively on access to rooftops, towers, and other medium and high elevations sites in order to improve range.")

[11] *See Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment, Accelerating Wireline Broadband Deployment Removing Barriers to Infrastructure Investment*, Declaratory Ruling and Third Report and Order, 33 FCC Rcd 9088 (2018) (addressing the issues of siting fees, aesthetic requirements, and timeliness of application review); *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment*, Third Report and Order and Declaratory Ruling, 33 FCC Rcd 7705 (2018) (prohibiting state and local moratoria pursuant to Section 253(a) of the Communications Act of 1934); *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, Second Report and Order, 33 FCC Rcd 3102 (2018) (streamlining NEPA and NHPA reviews for small wireless facilities).

[12] *See, e.g.*, CTIA Comments at 1-2; Google Fiber Comments at 4; Interstate Wireless Inc. d/b/a Az Airnet Comments at 5; Starry Inc. Comments at 1-2; WavSpeed Inc. Comments at 1; WISPA Comments at 1.

By expanding the OTARD rule, the Commission would be lowering another potential barrier "to siting fixed wireless base stations closer to consumers' homes."[13] The record supports the Commission's prediction that modifying the OTARD rule would "allow fixed wireless providers to deploy hub and relay antennas more quickly and efficiently and would help spur investment in and deployment of needed infrastructure in a manner that is consistent with the public interest."[14] Indeed, several fixed wireless providers noted that they would expand their deployment to permit better broadband access—especially in rural areas.[15]

Importantly, the proposed extension of the rule would not increase the size of devices subject to the rule; rather, the proposed reforms would expand the purposes and uses of the devices subject to the rule.[16] As noted above, innovators are deploying current and next generation facilities primarily through small form factors, and most existing fixed wireless internet service provider antennas would meet the one-meter size limit.[17] The Commission also proposes to preserve safeguards for restrictions on devices in the cases of a clearly defined,

[13] Letter from Claude Aiken, President and CEO, WISPA, to Marlene Dortch, Secretary, FCC, WT Docket No. 17-79, at 1 (Mar. 14, 2019); *see also* Google Fiber Comments at 1-3; Interstate Wireless Inc. d/b/a Az Airnet Comments at 2-3.

[14] *Notice* ¶ 7; *see also* Starry, Inc. Comments at 5 (predicting that if Starry's base stations were covered under OTARD as proposed in the *Notice*, Starry "would be able to pass more than 1 million additional households with a gigabit-capable signal this year alone").

[15] *See, e.g.*, Google Fiber Comments at 2-3; Interstate Wireless Inc. d/b/a Az Airnet Comments at 5 (a WISP providing access in rural Arizona); Ioania Unlimited, Inc. Comments at 1 (a WISP providing access in rural Missouri); WavSpeed Inc. Comments at 1; New Wave Net at 1 (operating in rural Central Illinois).

[16] *See Notice* ¶ 11.

[17] *See* Interstate Wireless Inc. d/b/a Az Airnet Comments at 4; Starry Inc. Comments at 8 (observing that "many" fixed wireless antennas can meet the one-meter size irrespective of whether they transmit or receive).

legitimate safety objective, or to preserve prehistoric or historic places.[18] These safeguards will continue to protect important public interests while bringing new connectivity to communities.[19]

The Commission explained its authority to extend OTARD protections to all fixed wireless equipment in the *2000 Competitive Networks Order*, and the Commission can rely on the same reasoning in this proceeding.[20] Although the Commission distinguished between the technical characteristics and consumer needs of receivers and transmitters in the 2000 order,[21] the "distinctions between base stations and receivers … no longer apply" as (i) providers no longer have multiple options for where to site base stations and (ii) and "receivers and base stations may be indistinguishable in size and functionality."[22] In addition, the record suggests that the Commission has other alternative legal foundations to support extending the OTARD rule to fixed wireless facilities measuring one meter or less.[23]

IV. CONCLUSION

The consumer technology industry is rapidly innovating, but these innovations rely on ubiquitous connectivity with increasing capacity. The Commission should adopt its proposal to

[18] *Notice* ¶ 11.

[19] *See* Starry, Inc. Comments at 8.

[20] *Promotion of Competitive Networks in Local Telecommunications Markets, et al.*, First Report and Order and Further Notice of Proposed Rulemaking, 15 FCC Rcd 22983 ¶¶ 101-16 (2000).

[21] *Id.* ¶¶ 109, 114.

[22] Starry, Inc. Comments at 9.

[23] WISPA Comments at 12-17 (noting several legal foundations for Commission action to extend the OTARD rule to protect all fixed wireless facilities measuring one-meter or less).

amend the OTARD rule to expressly include hub and relay antennas as a next step to spur broadband and next generation wireless services.

Respectfully submitted,

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